

REMARKS

Claims 1-18 and 20 are pending in this application. By this Amendment, claims 1, 8, 18 and 20 are amended. Claim 19 is canceled without prejudice to, or disclaimer of, the subject matter recited in that claim. Reconsideration of the application based on the above amendments and the following remarks is respectfully requested.

The Office Action, on page 2, rejects claims 18-20 under 35 U.S.C. §112, second paragraph, as being indefinite. Specifically, the Office Action asserts that claim 18, line 5, appears to be incomplete. Claim 18 is amended to obviate the rejection. Accordingly, reconsideration and withdrawal of the rejection of claims 18-20 under 35 U.S.C. §112, second paragraph, are respectfully requested.

The Office Action, on page 2, rejects claims 1, 2, 4-7, 13 and 14 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,743,154 to Epstein in view of U.S. Patent No. 6,050,822 to Faughn. The Office Action, on page 3, rejects claims 8-10, 12 and 15-20 under 35 U.S.C. §102(b) as being anticipated by Faughn. These rejections are respectfully traversed.

Epstein discloses an omni-directional moving surface including a plurality of ball bearings; a bladder for enveloping the plurality of ball bearings; and an interface for connecting the bladder to a virtual reality means (Abstract). Specifically, Epstein, with reference to Fig. 7, discloses a revolving bladder 401. The Office Action asserts that this revolving bladder 401 corresponds to a base layer of a pressure-sensing mat. This is incorrect. No pressure sensing occurs in the Epstein apparatus.

The Office Action admits that Epstein does not disclose a plurality of pressure-sensing elements formed over the base layer, but rather cites Faughn as disclosing such a feature. Faughn teaches an electromagnetic locomotion platform comprising a structural honeycombed subplate comprising a top plate material having a very low coefficient of

friction on the surface. The top plate material could be made of plastic, a composite, micro ball bearings, or the subplate could be an air cushion table (similar to an air hockey table) with electromagnets (EMs) placed underneath it and mounted flush to or near the top surface of the subplate. These EMs are individually controllable in on and off status, polarity and intensity of their magnetic force (col. 4, line 66 - col. 5, line 8).

Faughn discloses that as a foot, object, or extremity nears the sensor, the sensor tells the computer to activate the EMs and apply the current for the desired forces and translation. Faughn discloses that the user wears modified footwear with a special sole containing thin flexible metal sheets, bars or a special ferrous particle material impregnated in the sole, or other active system, to enhance the attractive force of the EMs (see, e.g., col. 5, lines 16-35). The signals generated by the EMs to be output to the virtual reality system are not based on pressure sensing but rather on disturbance in the electromagnet fields generated by closely adjacent and/or overlapping EMs. As such, Applicants respectfully submit that Faughn cannot reasonably be read to disclose, or even to have suggested, a plurality of pressure-sensing elements as are recited in the instant claims. Thus, even if Faughn were combined with Epstein, the combination would not include pressure-sensing elements.

Independent claims 1, 8 and 18 varyingly recite a locomotion interface comprising a pressure-sensing mat including a base layer, a plurality of pressure-sensing elements formed over the base layer, and a top layer formed over the plurality of pressure-sensing elements, wherein the plurality of pressure-sensing elements output signals indicative of pressure applied to the top layer to a virtual reality system. Applicants respectfully submit that neither Epstein nor Faughn, nor the combination of these references, can reasonably be read to teach, or even to have suggested, the specific configuration of the pressure-sensing mat recited in at least independent claims 1, 8 and 18.

Additionally, Applicants respectfully submit that the features of Epstein are not combinable with the features of Faughn as the Office Action asserts. Faughn specifically discusses shortfalls associated with omni-directional treadmills such as are disclosed in Epstein (see, e.g., col. 4, lines 43-63). As such, it would not have been obvious for one of ordinary skill in the art to combine the teachings of Epstein and Faughn in a manner that would have resulted in the subject matter of these claims. In fact, the disclosure of Faughn teaches directly away from such a combination.

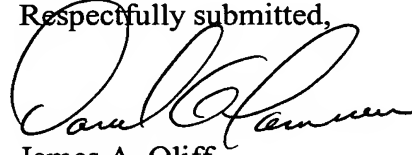
For at least these reasons, Applicants respectfully submit that the combinations of all the features recited in at least independent claims 1, 8 and 18 are neither taught, nor would they have been suggested, by Epstein, Faughn, or a combination of these references. Further, claims 2-7, 9-17 and 20 are also not taught, nor would they have been suggested, by the combination of the applied references for at least the respective dependence of these claims on independent claims 1, 8 and 18.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-18 and 20 under 35 U.S.C. §§103(a) and/or 102(b) as being unpatentable over, or anticipated by, any combination of the applied references are respectfully requested.

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-18 and 20 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number set forth below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Daniel A. Tanner, III
Registration No. 54,734

JAO:DAT

Date: April 13, 2005

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

**DEPOSIT ACCOUNT USE
AUTHORIZATION**

Please grant any extension
necessary for entry;
Charge any fee due to our
Deposit Account No. 15-0461